

AN EXAMINATION OF ALTERNATIVE MARKETING STRUCTURES

- A LITERATURE SEARCH

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PREFACE

During discussions with Department of Trade and Industry representatives in May 1983, it was suggested that there was a need to critically examine the available alternative marketing systems for agricultural products. This was considered to be especially important in view of the possible introduction of new market organisation systems in the New Zealand horticultural sector. As a result of the discussions, a research contract was entered into between the Agricultural Economics Research Unit and the Department of Trade and Industry. The intention of the research was to provide a review of the types of marketing systems used for various products and to make a preliminary assessment of their relevance to the New Zealand situation.

This Discussion Paper provides the literature review that was undertaken for the project. A summary of the main literature findings is presented.

Two Research Reports (Numbers 173 and 174) are also published on this subject. These present further material on the analysis of the possible market structure arrangements, with special reference to the horticultural sector. Together with this Discussion Paper, the three publications constitute a useful compilation of material on this important question and form the basis for further specific product studies.

RG Lattimore
Director

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SECTION ONE

INTRODUCTION

This Discussion Paper presents a report on a literature survey of alternative market structures, carried out under contract to the Department of Trade and Industry.

This report has been divided into two Parts. Part 1 (Sections 2 to 7) presents summaries of papers grouped into studies of marketing institutions and performance, discussions of some marketing options available, analyses of market performance and brief comments on the export market environment and economic and marketing theory. These summaries are entirely drawn from the relevant papers and do not necessarily reflect the judgements of the authors of this report. Part 2 (Sections 8 to 11) of the report presents a summary and discussion of the results of the literature review, including key references.

Sections 8 and 9 outline the main characteristics of domestic agricultural markets and some factors which determine market structure, as presented by various authors. In Section 10 a discussion of the objectives of the major types of statutory marketing organisations and associated arrangements which exist in the agricultural sector of developed economies is presented.

Section 11.1 consolidates the findings of workers who have analysed aspects of the performance of statutory marketing authorities. Measures for price and income enhancement and stabilisation are considered, as well as their effect on economic efficiency. Finally, Section 11.2 examines the role of the market environment in determining the nature of marketing institutions.

This review has briefly outlined the elements of marketing systems for agricultural products (i.e. food and fibre products) as they apply to domestic markets. A natural progression from this point would be to focus on a narrower field: that of specific horticultural products or product groups, and the marketing environment which they might face in international markets. This Discussion Paper therefore provides a framework within which further work of a more specific nature should be undertaken. Research Reports 173 and 174 present the results of further study of the horticultural sector.

PART ONE

SECTION 2

MARKETING STRUCTURES AND INSTITUTIONS

2.1 Price Formation and the Performance of Agro-food Systems

OECD

The price system in the market economy should ensure that:

1. the agro-food system should perform consistently with the objectives and policies at a national and international level;
2. the agro-food system should achieve cost minimising resource allocation;
3. participants should not receive supernormal profits (defined by the economy as a whole).

Performance of the agro-food system should be measured by the same criteria as for the economy as a whole. Policy makers need to establish the rules of governing the price-formation process which will generate as nearly as possible the outcomes they prefer. Price formation is determined by the market structure, the characteristics of the product, the nature and behaviour of economic agents in the process, and the nature of price discovery mechanisms. Price efficiency in agro-food systems will clear the market in the short term, and in the long term, will fully reflect consumer preferences and the costs of production.

Studies presented at the seminar are summarised. Of the three papers which discussed international prices and domestic price formation, where the bulk of production was exported, similar characteristics were noted: one or a few agencies dealt with exporting, with direct or indirect government involvement; and domestic prices were ruled by export prices.

2.2 Dynamics of Marketing Channels; a Contribution to a Frame of Reference for Marketing Channels Research in Horticulture

Meulenberg, MTG

Marketing channels for horticultural products evolve from the distribution policies of producers and other participants in the channel. Criteria by which producers can evaluate marketing channels are outlined, and include optimal market access, efficiency of distribution, and bargaining power.

Markets for horticultural produce tend to be dynamic rather than static. There is therefore a need for firms which are large

enough to implement market policies which can incorporate changes in product, distribution and price, and can undertake promotion. Meulenbergh suggests that as a market moves from stasis to dynamism, the market structure also develops along a path from pure competition towards oligopoly. Therefore concentration of supply, e.g. through co-operatives, marketing boards or producer groups, is necessary to set up an adequate market policy.

Some problems encountered in the evolution of horticultural marketing systems include:

1. different marketing objectives pursued by the participants in a market channel;
2. the resources of any one participant may be inadequate;
3. the inertia of established market channels with respect to change, or conflicts with new channels;
4. adequate bargaining power requires concentration of supply of product. Many producers have not yet appreciated this.

Vertical co-operation, although not necessarily vertical integration, is clearly desirable to overcome these problems. A systems approach rather than an institutional approach is favoured for marketing channel research.

2.3 Agricultural Co-operatives and the Theory of the Firm

Bateman, DI et al

This paper distinguishes between requisite societies in which farmers purchase goods co-operatively, and marketing co-operatives, where farmers sell their individual outputs through a jointly owned processing unit. Bateman examines eight maximising objectives for each type of co-operative:

1. Profit maximisation of the co-operative firm;
2. Joint profit maximisation;
3. Output or throughput maximisation;
4. Maximisation of membership;
5. Maximisation of producer (consumer) surplus plus profit;
6. Maximisation of patronage refunds;
7. Maximisation of net returns per unit (minimisation of net price per unit);
8. Maximisation of producer (or consumer) surplus.

A weakness is that the models are unrealistic; most societies are multi-purpose. Non-maximising objectives are discussed briefly.

These include:

1. Encouraging a spirit of self help;
2. Enabling satisficing between price, dividend, and capital accumulation;
3. Preventing oligopolistic or oligopsonistic exploitation, thereby minimising supernormal profits in the system;
4. Providing a window on reality, i.e. proving to members that exploitation is not occurring as they may suppose.

2.4 Economic Development and Fruit and Vegetable Market Organisation

Montigaud, JC et al

The paper compares the organisation of the fruit and vegetable market in three countries with different levels of economic development (France, Spain, Canada), and presents three contentions:

1. The need for supply control is no longer an issue. Short term adjustments are necessary. Long term supply control varies depending on the level of economic development of any country;
2. Market organisation follows a distinct process:
 - a) voluntary grouping of a minority of producers or a commodity to enable marketing - usually as a result of a crisis;
 - b) more products are drawn in, with their own marketing groups;
 - c) more producers join the organisation - eventually, membership becomes compulsory;
 - d) the organisation begins international co-ordination with other producer bodies in other countries;
 - e) the organisation integrates vertically - shipping, wholesaling, and processing.
3. Highly evolved forms of market organisation depend on high levels of economic development.

Attitudes towards intervention by Government vary from:

- a) "free-market" - no private or public organisation;
- b) "organised free-market" - prices are set by the market via the auction system; there is free entry of participants;
- c) large firms create oligopoly and organise the market by

implied agreement;

- d) "professional interventionism" - private professionals assume leadership of the industry when it is necessary;
- e) "public interventionism" - creation of public institutions with the objective of short and long term market regulation, observing both consumer and producer interests, and co-ordinating different levels of marketing systems.

If the organisation of the market increases, new problems occur, e.g. those concerning national co-ordination, or protection from foreign competition. Also, as one commodity market becomes organised with limited entry, producers will shift to other less organised products, generating demand from existing producers for market regulation. Greater vertical co-ordination is necessary to ensure equitable spread of risk. Consumer organisations - supermarkets, etc, generally oppose producer organisations. Governments may also prefer market structures which are less organised and therefore gain lower prices for products.

2.5 Horticulture and the New Zealand Economy; Some Suggested Developments in Horticultural Economics

Rae, AN

The paper briefly describes kiwifruit marketing and some of the problems encountered, such as irrational distribution of supplies between markets, possibly caused by inexperienced exporters, perishability of produce, and which result in lower prices.

Rae speculates whether state marketing boards could improve foreign exchange earnings from exporting of kiwifruit. Evidence suggests that marketing boards do more to increase earnings by manipulating price and supply with a given demand, rather than by establishing markets and increasing demand.

Some alternatives are considered. These include the establishment of Marketing Authorities with power to licence exporters, or the extension of producer co-operatives into export marketing. Rae suggests that the potential of these institutions to export high value, perishable product should be explored.

The strength of present private enterprise exporting was that some of the 10-15 exporters involved in the kiwifruit export industry had marketing experience to mount sophisticated market development programmes, from which all exporters have benefited. Also, vigorous competition between exporters had improved producers' prices in New Zealand.

2.6 Panel Discussion of State Trading Agencies

Warley, TK

State Trading Agencies are described as "exporting and importing on government-defined transaction terms". International trade in agricultural produce is conducted by a variety of institutions, often with different objectives, practices, and market power. The majority of developed market economies use State Trading Agencies to manage importing and exporting activities - in 1976, 30 percent and 40 percent of United States exports and imports respectively involved State Trading Agencies. Three factors in the growth in importance of State Trading Agencies are suggested:

1. increasing participation in trade by centrally planned and developing economies;
2. expansion of international commodity trading arrangements;
3. existence of State Trading Agencies induces their formation in trading partners.

The presence and behaviour of State Trading Agencies in an international market must have an influence on the price discovery mechanisms and stability of the market. The GATT requires State Trading Agencies to be non-discriminatory and governed by commercial considerations in their transactions, but this has little influence on some nations.

Warley suggests that the basic theoretical constructs to describe the activities of State Trading Agencies in the international commodity markets are inadequate.

2.7 Marketing Boards as Societal Marketing Systems

Izraeli, D; Zif, J

A marketing system in a complex economy needs to:

1. allow for competition while minimising its dysfunctional aspects;
2. provide better co-ordination when the market mechanism is insufficient, while minimising Government intervention;
3. enable social objectives (consumer interests, ecology etc) to be considered, without losing the benefits from entrepreneurship and competition.

Marketing boards can be classified following from Abbott and Creupelandt as:

Non-Trading:

- a) advisory and promotional boards, which engage in market research and promotional activities;

- b) regulatory boards, which monitor quality assurance and packing standards;
- c) price stabilisation boards, which engage in supply management and/or price fixing and deficiency payments.

Trading:

- a) price stabilisation boards with trading powers which maintain buffer stocks to stabilise prices;
- b) export monopoly boards, which may act as sole sellers or may appoint agents to sell produce overseas;
- c) domestic monopoly boards, which act as sole traders and processors, sometimes through agents.

The objectives of marketing boards can be categorised thus:

1. improved profitability for producers;
2. increased productivity as a means of increasing profitability;
3. market development;
4. social responsibility; conforming with social and political norms;
5. innovation, as a means of achieving economic progress.

Some of these objectives conflict, and the weight attached to them varies from one board to another.

In unorganised agricultural markets, the first level intermediaries (handlers) and sometimes the processors are the price markers, with the producer and the consumer having both the greatest numbers and the least bargaining power, being the price-takers. Therefore voluntary horizontal integration to improve bargaining power results in the formation of co-operatives, marketing agencies and boards. Consumer co-operation is relatively more recent, and is usually dealt with as a role of government; giving partial justification for government intervention in the market.

2.8 What are Marketing Orders?

Jesse, EV (three papers)

Under the Agricultural Marketing Agreement Act 1937 and amendments, producers and handlers of specified fruits and vegetables in the United States may seek fruit and vegetable marketing orders to alleviate marketing problems. A marketing order is a regulatory programme issued by the Secretary of Agriculture at the request of growers which legally obligates all commodity producers and handlers to abide by order terms. These typically involve regulation of commodity quality and quantity, packing standards, and conduct of research and

market development projects. Volume management is implemented through producer allotments and market allocation plans, and market flows are regulated by reserve pools, shipping holidays and "prorates" - limitations on the maximum volume a handler may ship over a stated period.

Quality control provisions set minimum grade, size and maturity standards. Market support activities promote more orderly marketing and can include standardisation of packaging, levying of fees on handlers to finance research in production, marketing or advertising.

Marketing orders are administered by a nominated committee of unsalaried grower and handler representatives, who recommend regulatory policy to the Secretary of Agriculture. Proposed regulations are publicly notified before final regulations are issued. Committee expenses are funded by a levy on handlers; of the 47 commodities for which marketing orders exist, the median producer membership is seven and the median handler membership is four.

A review of costs and benefits identified as benefits the following:

1. stabilised producer prices and incomes due to quantity controls, which are typically applied during years of high production but do not affect prices in years of short supply;
2. stimulated production due to the reduced risk following on income stabilisation;
3. increased quality assurance, reduced handling costs and waste resulting from more uniform, higher quality product;
4. yield-increasing and cost-reducing research funded by handler levies;
5. increased amount and availability of marketing information leading to better decision making.

Possible costs included the following:

1. where quantity controls are applied continuously, long-run adjustments of productive capacity could lead to inefficient resource allocation and surplus crops;
2. where the cost of allotments was high, new producers could be denied entry, leading to deficits of productive capacity;
3. seasonal volume controls such as prorates could restrain a handler from operating at an optimum level;
4. seasonal volume controls could reduce price competition;
5. size, grade and maturity standards may reduce the range of consumer choice with respect to quality.

Effects of marketing orders included transfers of income between consumers, handlers and producers. Producers gain short-run

advantages at the expense of consumers where quantity controls are concerned. In some cases, prorates and shipping holidays result in income transfers from handlers to producers; and marketing orders, by imposing industry goals on individuals limit the flexibility in decision-making by both producers and handlers.

2.9 Organisational Structure and Marketing Strategy. A Study of Co-operative Marketing in European Agriculture

Foxall, GR

Chapter 1 analyses variations in market shares held by co-operatives in EEC countries. Market shares are assumed to indicate farmers' willingness to deal through co-operatives, and thus indicate how effective a market force a co-operative is perceived to be.

The EEC countries are classified into groups which show:

1. consistently high co-operative shares of a number of markets (France, Denmark, Holland);
2. co-operative shares which are inconsistent although high in some cases (West Germany, Luxembourg, Ireland);
3. co-operative shares which are negligible from most products but are still important in a few cases (Belgium, Italy);
4. the UK whose comparative co-operative market share is low.

Some possible reasons for the difference between nations, and between the UK and the rest of EEC are examined, including EEC membership itself, financing arrangements, legislation, management and co-operation among co-operatives. Some related factors which may explain some of the difference are:

1. government policies encouraging alternative marketing structures;
2. guaranteed prices can reduce the incentive for producers to be anything but production-oriented;
3. failure of the Agricultural Wholesale Society, which forced the growth of alternatives;
4. most EEC nations have an export-based food economy, whereas the UK has not.

Management was held to be of central importance to the success or failure of co-operatives, but not to explain the difference between the UK and EEC. Co-operatives in Europe usually have three levels; the producer groups (primary), regional- or commodity-based federations of co-operatives (second tier), and third-tier co-operatives which operate at national level. Secondary and tertiary co-operatives exert strong, centralised management control over primary co-operatives, thus reducing competition, allowing intergration and larger economies of scale, and reducing the democratic involvement of producers in

decision-making.

Chapters 2 to 9 examine the EEC nations individually, and Chapter 10 presents hypotheses about the relationship between organisational structure and market strategy with reference to the UK.

Foxall's hypothesis is to the effect that certain types of structure (secondary or tertiary co-operatives) facilitate development and exercise of market power, which is expressed in high levels of market share.

While the UK has a number of co-operatives which are quite large, the structure of secondary and tertiary co-operatives such as those existing in Europe is relatively under-developed. Exercise of the characteristics of those structures - low autonomy at primary level, ability to compel the activities of member co-operatives, centralised management - is contrary to the principles of co-operative societies in the UK, which are embodied in law and cannot be contravened. Tertiary or "super-co-operative" bodies in Europe which have strong marketing strategies tend to become self-perpetuating corporate bodies.

The author concludes that for co-operatives to advance the market share of producers it is necessary for some form of oligopolistic marketing structure to exist. Further, secondary and tertiary co-operatives may be necessary to interpret EEC common agricultural policy to producers. For co-operatives in the UK to achieve this, they must develop similar types of organisation to those prevailing in Europe.

2.10 Israeli Marketing Boards and Their Environment

Izraeli, D; Zif, J

Agriculture development and production in Israel is based on a policy of active government intervention, to achieve as targets:

1. income maintenance and socially just distribution of income;
2. increased agricultural production, import substitution and export;
3. non-economic goals such as population dispersion.

In 1973, Israel was 70 percent self-sufficient in agricultural production, of which 87 percent was under the control of one of 13 production and marketing boards. There is no general enabling legislation for the establishment of such boards; each requires specific legislation, and only five of the 13 have statutory authority. Board membership must comprise 50 percent producers, 25 percent Government, 25 percent public (processors, wholesalers, retailers, consumers). The boards can thus be defined as societal boards in that all participants in the production-processing-distribution-consumption process are explicitly represented.

Boards can be described as advisory, with a responsibility to

direct and regulate marketing, or executive, with responsibilities to engage in local and export marketing. There has been a general tendency for advisory boards to take on more executive functions; three of the five executive boards were initially advisory.

All of the boards have advisory and promotional, regulatory and price-stabilising functions. Eight have additional trading functions, with seven of these acting as export monopoly boards. However, the activities of any board on behalf of any one of the products it is responsible for can vary from minimal to comprehensive, depending on the marketing requirements for that product.

Agricultural production is based on two forms of agricultural settlement: the kibbutz or collective settlement in which all property is commonly owned, and the moshav or co-operative settlement comprising groups of small family farms with members co-operating in marketing and mutual aid for weaker members. A small number of moshavim have a central farm which is communally owned and worked, surrounded by small plots privately owned by members.

Eight of the marketing boards trade in produce to stabilise prices but only three of these act as domestic monopolists (for citrus fruit, potatoes and onions, and cotton). Price stabilisation in the non-trading boards is generally managed by government-funded subsidy. This has given government considerable power over those boards with statutory authority, but as policy has changed and subsidies are less favoured, Government's control over agriculture is diminishing.

Generally, marketing boards do not intervene once produce has reached the processor or wholesaler. The largest wholesaling organisation in Israel is Tnuva, a central wholesale marketing association of agricultural markets. Tnuva attempts to reconcile adequate minimum producer prices with reasonable consumer prices, by reducing intermediary handling of products. Advice is given on handling and packing produce. Tnuva also maintains processing companies which absorb seasonal surpluses, and handles citrus and other export products through subsidiaries.

Government involvement, as well as a diminishing function of price support, includes industry planning, research, and extension services. Research and extension has been vital to Israel's expansion in agriculture.

Exporting of agricultural products is characterised by a highly centralised market structure. The production and marketing boards are the sole exporting authorities for their particular commodities. Growers or wholesalers who want to export independently must co-ordinate their activities with the appropriate board. Some less perishable commodities are exported by the controlling board acting individually (citrus, cotton, groundnuts); more perishable produce is handled by Agrexco, a non-profit marketing company jointly owned by the remaining export monopoly boards, the government and Tnuva. Agrexco enables the pooling of resources to more efficiently handle, store, transport, promote and sell highly perishable products in markets which have high penetration expenses; and undertakes the charter of refrigerated ships and aircraft for rapid transport, and maintenance of regional sales offices abroad. All Israeli produce handled by Agrexco

is marketed under the brand name of "Carmel".

2.11 Agricultural Marketing for Exports: The Israeli Case of Exports of Fresh Produce

Shehory, Y

The successful development of Israel's fresh produce exporting industry is due in part to a philosophy that marketing abroad should be handled through one channel, by one hand. This allows the grouping rather than fragmentation of resources, and the building of a infrastructure which would be impossible for small exports. A single channel also avoids seller competition abroad, and allows comprehensive market strategies aimed at maximising returns.

In Israel farm production is characterised by co-operative or collective farms which are highly capital intensive because of objections to hired labour. Labour costs are high, with a high standard of living in rural areas. Developing export markets required changes in plots and cultivars in some cases. There was little initial knowledge of post-harvest handling of perishables, and relatively high distances from Israel to export markets. Assets which Israel relied on in overcoming these problems included an open-minded farming community, good agricultural research facilities and extension services, and an agricultural industry mostly organised into production and marketing boards, which act as sole exporters. For less perishable items such as cotton, citrus and groundnuts, the boards also carry out exports. But for more perishable produce, individual boards and government formed Agrexco, an agricultural exporting company which is 50 percent government funded and is a non-profit organisation. Agrexco combines the resources of individual boards for export, and is responsible for refrigeration, storage, transport, sales offices, and promotion activities. Some products go to a central packing house, while others are packaged by the farmer. This is considered to be sociologically more acceptable; control of identifiable product is retained further along the process, and the product is accepted or rejected in packed form. Quality control is therefore directly associated with the farmer's activities. In order to reduce the dissemination time for new information, some farmers in each region are selected to grow new cultivars or to apply new methods. Government finance protects against total loss in the case of a crop failure.

Promotion efforts are two-fold; one involves building up the trademark of "Carmel" as a trademark abroad, and the second involves market development of new commodities, such as avocados or peppers. The maximum level of Government participation amounts to 50 percent. Some perishable products are exported by their own marketing boards, e.g. flowers. Private exporters of flowers often concentrate on the main market, and can outbid each other. Also, as smaller traders there is little flexibility in terms of alternative outlets when the market is over-supplied. Phenomena of this type are generally avoided by Agrexco.

2.12 Administered Price Formation of Agricultural Products and the Use of Computer Models in Finland

Kettunen, L

The agricultural sector in Finland is characterised by many small family farms, low per unit yields, migration of labour to cities, and over-supply of some produce which is uncompetitive to export. The aim of the government is self-sufficiency in food production, and retention of rural population. Pricing policy is to fix the target producer prices to:

- a) cover costs, and
- b) ensure an equitable income.

Any deviations from the target price greater than five percent are adjusted by appropriate policy. This can involve differential prices for produce from low-producing units. Surplus production is exported, with a subsidy to offset differences between the world price and the production cost. On some commodities production ceilings have been set which limit the volume of exports which government is prepared to subsidise. Beyond that level the producer bears the loss himself.

2.13 The Role of Government in Post Farm-Gate Price Determination in Canada

Hemming, AJ

The processing, distribution and retail sector (i.e. the post farm-gate sector) in Canada is described. The industry is oligopolistic in nature, with a high degree of price transparency in agricultural raw materials markets. Price control has occasionally been exerted by government through various boards, which have been disbanded when their mandate was complete, but price formation and improvements in price efficiency are largely left up to industry. Government's role is generally confined to redress an imbalance of bargaining power between farms and the processing, distribution and retail sector, by legislation enabling marketing boards and by measures to improve farm-gate price transparency; and by generating an environment favourable to dynamic efficiency and growth.

2.14 Recent Changes in the Constitution and Powers of the Australian Marketing Boards

Campbell, KO

This article reviews recent changes in the composition and administrative responsibilities of the federal and state marketing boards in Australia.

Marketing boards generally exist at two levels: federal boards which are primarily concerned with regulating overseas trade, but with the exception of the Wheat Board do not themselves engage in trade, and state marketing boards, of which most but not all operate as producer monopolies in the domestic market.

Federal or Commonwealth marketing boards each have their own enabling legislation and therefore are not entirely uniform in nature. Some boards were established on the producers' initiative and some on government initiative. During the 1970s reforms to marketing legislation embodied four main points:

1. Efforts were made to reduce producer control, by reducing the number and proportion of board members who represent the producer, and by appointing rather than electing representatives. Some marketing boards have been restructured as corporations.
2. Marketing expertise has been enlarged by appointment of industry representatives with financial, managerial expertise.
3. Provision has been made for intervention in the Board's affairs by the Minister for Primary Industry.
4. Extension of trading powers enables Boards to more easily break into new markets, or deal with centrally planned economies.

Most of these changes are politically inspired and have met with some producer resistance. However, this is not consistent for all producers, who have been accustomed to varying levels of intervention for various commodities, and the author suggests that producers under economic stress look to change as a remedy, rather than a specific direction of change.

State marketing boards, which are described as "compulsory marketing co-operatives", are also subject to pressure to reform. The extent and direction of reform differs between states; in Victoria reforms follow the Federal Board reforms, while in New South Wales, the reverse is true. Farmer interest in state marketing boards varies over time, but is generally held to be against major reforms. In New South Wales, 10 of the 13 boards established up to 1971 have been disbanded, but a further six, mostly associated with new commodities, have since been set up.

The author concludes that producer controlled marketing boards are an anachronism in modern western societies and they are likely to be replaced in Australia by statutory marketing corporations.

2.15 Agricultural Marketing Boards

Hoos. S (ed)

The Giannini Foundation of Agricultural Economics (University of California) has undertaken a research study at the request of the USDA, of experiences with marketing boards in other countries so that guidelines could be put forward for a possible policy change in the United States.

The objectives of the study are: 1) to present general specialised information distilled from the experience of other nations with marketing boards (England, Canada, Australia, New Zealand, West

Africa, Israel, and The Netherlands) and 2) to provide a basis for considering agricultural marketing boards as a replacement for the agricultural marketing agreements and orders in operation in the United States since 1937. These orders and agreements stem from recovery legislation enacted during the Great Depression of the 1930s. As both marketing orders and marketing boards evolved, the pattern of original voluntary co-operation was seen to be a weakness since it allowed non-participants to remain outside the co-operative and still derive benefits. To cope with this situation marketing order legislation was written and marketing boards were developed.

Criticism of marketing boards includes arguments against their compulsory aspect, and also that farmers as a single sector of society have too much influence on their composition and operations. However marketing boards should not be viewed as huge stereotyped institutions everywhere, rather as organisations reflecting a dynamic relationship with government policy. They are creatures of government and are subject to amendments, modification, and even annulment.

Enabling legislation for marketing boards specifies their objectives, usually in broad terms. A recurrent objective is the raising or maintaining of incomes over time, by development and use of marketing procedures to favourably affect farm prices and returns. This would include establishment and operation of quality standards. The success of marketing boards in achieving their objectives is not well documented, however after existing for more than forty years, they remain a favoured avenue among farmers and agricultural policy activists to achieve improved returns to growers.

Marketing boards can be divided into domestic or export boards which can be further subdivided into trading and non-trading boards. All boards are concerned with production, marketing and/or price.

Some issues that remain unresolved from this study are:

1. Are the objectives commonly stated rational ones?
2. Why establish a separate organisation such as a board instead of a branch of a central agricultural agency with the same goals, duties and means?
3. What should be the composition of a board?
4. Should the central (government) agency have review and veto power over board-delegated operations?
5. Should marketing boards be established by legislation?
6. What is the best way to keep a board vital and relevant?

The bargaining power of boards is not really defined and has not been measured. The author does put forward a definition where the sum of the bargaining power of the seller and buyer equals one. The outcome price depends on the target prices of both and the seller's bargaining power increases with the volume he has to sell.

Among the criticisms of boards is their frequent use of quota

systems. They may not have the conceptual design or the operational know-how to implement a system that is acceptable to the industry. The current need is for a quota system that is theoretically sound, administratively feasible, and politically acceptable. Since economic theory in this area is still underdeveloped, acceptance and operation of boards is under threat. Other criticisms are recognition by boards of both efficiency and equity. From the view of farmers, handler and other industry participants, neither marketing boards nor marketing orders have a compelling advantage.

The author sums up this overview by stating that marketing boards in many cases are directed by their enabling legislation to concern themselves with variability over time with prices (uncertainty). Farmers have come to look to marketing boards as aids in dampening the market variabilities that produce uncertainty. Of course there is no guarantee that the board's interference by affecting sales and purchases at appropriate times will dampen rather than enlarge price variability. Thus although the objectives of boards and marketing orders are similar, there are fundamental differences in their breadth and strength. Boards usually exert more authority, often regulating production on the farm as well as at the marketing level. The choice between them would therefore entail the US government to consider both economic and social policy as well as the philosophy of an institution designed to bolster the income position of farmers.

2.16 US Marketing Agreements and Orders: A Retrospective View

Hoos, S

The main purpose of agricultural marketing order programs is to increase producers' net returns. To achieve this objective, marketing orders include various types of provisions: control of volume marketed, size, grade, pack, or container regulation; and the prohibition of unfair trade practices. Each order may include one or more of these provisions, depending on the particular order and whether it is based on federal or state legislation. Most states do not provide for volume control but federal marketing orders do control volume and prohibit unfair trade practices. Federal advertising and sales promotion is generally not provided for in the legislation.

As with other tools, the effectiveness of marketing orders depends upon the skill and judgement of the operators and the nature of the problems involved. Granting that marketing orders can do certain types of jobs, one must note that marketing orders are not doing the job that is often attributed to them. They have not, in fact, solved some of the really significant problems, particularly those involved with chronic surplus situations. In the author's judgement agricultural marketing orders do have a valid role to play, but this role is limited to particular crops at particular times and under particular conditions. These conditions are (if volume control is exercised):

1. The demand for a crop at the farm level should be price-inelastic with not too low income inelasticity, and the demand cross elasticities should not be high (relative to other agricultural products).

2. A community of mutual interests, in particular in marketing problems, must exist among the participating growers and/or handlers.
3. The production is concentrated in small enough areas so that similarity of production and marketing conditions among the growers exist.
4. Some actively interested organisation (e.g. co-operative) educates the growers about the program, urging them to vote, sponsoring able men to sit on the administrative board, encouraging the adoption of amendments to meet changing needs, and promoting the program as beneficial to individual growers as well as the group.

2.17 The British Experience

Currie, JM and Rayner, AJ

The British Agricultural Marketing Boards are essentially producer co-operative organisations with statutory coercive powers. Currently, they regulate the marketing of four commodities - milk, potatoes, fleece wool, and hops. Agricultural Marketing Acts (1931, 33, 49, 58) have furnished the relevant enabling legislation. The activities of the British boards have to be viewed against the background of an economy that imports a large proportion - currently some 35 percent - of its requirements for agricultural products. The boards' powers of market control have been confined to domestic supplies and decisions concerning import restrictions have always been the prerogative of government.

Marketing boards have existed in Britain for over forty years, yet no real consensus has been reached regarding the lessons to be learned from this experience. First there is the basic controversy over the desirability of having any enabling legislation at all, second there may be disagreement over a particular provision of the legislation, third there may be controversy over the desirability of a statutory marketing scheme for a certain agricultural product, and fourth there may be disagreement over the way a board uses the powers conferred on it.

Fears that individual farmers would lose their independence and that boards might abuse their monopoly powers have largely been obviated. There is little evidence to suggest that individual producers have been seriously disadvantaged in the interests of the majority, and the pessimistic vision of powerful boards charging consumers extortionate prices for essential food items has certainly not been realised. The reasons are probably because: 1) the continuation of schemes requires substantial producer support, 2) the individual producer can appeal against activities of the board, and 3) provisions for consumers committees, ministerial directives and parliamentary amendments of schemes, as well as 4) Britain's heavy dependence on agricultural imports, have all prevented monopoly power of boards and producers' lack of independence.

However if the worst fears towards marketing boards have not materialised, it must be admitted that the optimistic expectations of the sponsors of the legislation have not been realised either. That is, the farming community has not been made self reliant. For certain commodities there have been improvements in the efficiency of the marketing process or in market stability as a result of activities of boards (e.g. wool board, milk board, potato board). However in general such gains have been relatively modest, and to have made farmers genuinely self reliant would have required many more boards and a considerable burden on consumers. The boards would have to have extensive monopoly powers.

In the final analysis it is impossible to be sure whether British farmers have actually benefited from marketing boards because it is impossible to know what policy measures would have been implemented in their place. All we can be sure about is that the majority of affected farmers think that they have benefited.

2.18 New Zealand Marketing Boards

Veeman, MD

This paper describes the establishment and evolution of New Zealand boards (for major exports of dairy produce, meat, and wool, and also apples and pears, tobacco, milk, potatoes, wheat, and pork) and other similar bodies known as marketing authorities (eggs, citrus fruits, and honey). It outlines the activities of each of the main boards in turn and then goes on to describe the effects of these activities.

The general objectives of enhancing producers' prices and incomes, reducing fluctuations in producers' prices and incomes, and providing for a measure of equity of marketing opportunities between producers are common to many of the boards, but vary in consistence and importance between each one.

The effects of major board activities are related to these three objectives. The first, enhancing producers' prices and incomes, has led to attempting to increase demand, increase efficiency (reduce marketing margins), and by using their enhanced bargaining power to improve the price and income to producers. The effects of these efforts have been mixed. The Dairy Board and Meat Board have had some success in increasing demand through product and market identification. The Apple and Pear Board and to a lesser extent the Citrus Marketing Authority have also had useful effects. On the other hand the Meat Board also has instances where insufficient attention and expertise have been directed at expansion of markets. The fluid milk, citrus and honey boards can also be criticised for paying too little attention to the potential of the domestic market. Increasing efficiency, if successful should provide gains to both consumers and producers. However, these activities are unlikely to result in major increases in producers' prices. Some boards have successfully introduced cost-reducing technologies. For example, the Dairy Board in the processing of dairy products, the major export boards in allocating and timing shipping space as well as in the handling of their products, and the Wool Marketing Corporation in using objective measurements for wool

sales. Examples of inefficiencies resulting from boards' activities are the Milk Board and Egg Marketing Authority whose control systems limit adjustment of production to changing market conditions. The Apple and Pear Board's setting of retailers' margins does not encourage competition, and the Meat Board's adjustment of export grades in line with market preferences appears to suffer undue time lags. The enhanced bargaining power of boards has had some success in respect of gaining additional income from processors and input suppliers. Examples are; the negotiation of freight rates by export boards has kept increases in shipping costs down, and the internalisation of trading profits by the Dairy Board. The bargaining power of boards in increasing returns from consumers and government has been limited because the boards usually include government members who are generally expected to represent consumers' interests. However, both the Dairy Board and the Apple and Pear Marketing Board have increased producers returns through their marketing strategies.

The second objective of reducing fluctuations in producers' prices has also produced mixed success in terms of the boards' activities. The pricing procedures and marketing policies of the Dairy Board have succeeded in dampening price and income fluctuations. The Wool Marketing Corporation's activities also seem to have had some effect on reducing fluctuations in auction prices of wool. The Apple and Pear Marketing Board has stabilised prices to producers and consumers both within seasons and season to season.

Finally in considering the third general board objective of providing equity of market opportunities and returns between producers, the author states that most boards consider this as a secondary objective. The exception is the Dairy Board which tries to equalise market returns, but this action has had the effect of reducing the flexibility of the Board's operations.

The author concludes "that a number of these bodies possess the potential for more effective performance, though on balance, boards have performed a useful function." Also the performance and effectiveness of different boards appears to be strongly associated with the capabilities of the individual board members. A possible solution is the institution of a periodic and stringent examination by an independent commission of enquiry to assess the legislation and evaluate the activities and economic effects of each board. This body would report to government any recommendations for change.

2.19 Agricultural Marketing Boards in Canada

Veeman, MD and Loyns, A

Canadian boards covered about fifty farm products in 1969 and included 122 marketing boards of differing types of organisations. More than 75 percent of the value of farm production is subject to some form of regulated marketing, although the precise form and extent of control varies widely. These boards range from bodies that sponsor or perform promotion and research activities funded by compulsory levies on producers of particular products to boards that perform virtually all the marketing functions (including administered pricing and control of the volume of production) for the commodities that they regulate.

The boards have been growing in importance in the last 50 years and during the past decade have become major instruments of agricultural policy at both the federal and provincial levels.

The objectives of Canadian marketing boards are not clearly specified in the enabling legislation. The primary implied objectives are achievement of some improvement in the level and stability of producer returns, some transfer of the balance of market power toward producers, and reduction in the degree of market uncertainty faced by producers. It is also frequently argued that stability in price and continuity of supply for consumers is an objective of the boards.

General conclusions regarding overall performance of the boards can be made in terms of these objectives and in terms of overall efficiency and equity. It appears that the most restrictive boards have raised and stabilised producer prices. But these benefits have come at the expense of increased consumer prices and export opportunities. Also there appear to be some detrimental effects on the efficiency of resource allocation and in competition in processing. In addition on some occasions market uncertainty has been replaced by bureaucratic-decision making-induced uncertainty, with possibly as serious financial consequences. The more open (less restrictive) boards appear to have improved pricing and marketing efficiency to some degree, and also have offset oligopolistic power and improved producer confidence in the marketing system. Their price raising and stabilising abilities have been less than the more restrictive boards and they have attracted less public controversy. These boards have had a relatively neutral effect on consumers in comparison to the more restrictive ones.

SECTION 3

ANALYSES OF MARKETING INSTITUTION PERFORMANCE

3.1 A Synoptic View of Agricultural Marketing Organisations in the United Kingdom

Warley, TK

The author challenges the position that low incomes in agriculture are caused by marketing deficiencies, and suggests that low returns to resources are due instead to technological advances (yield-increasing), low price and income elasticities of demand for farm products, and to inadequate rates of movement of labour away from agriculture. It is suggested that while market systems are not perfect, they have some of the characteristics of efficient marketing - i.e. profits, margins and costs are all kept fairly low by competition. However, ambiguous price signals, price instability, perishability of product and distribution costs are a problem, and intervention by government or organised producer groups may be beneficial.

The purpose of intervention by producer groups is to improve the level and stability of producers' incomes. There are two ways to do this:

1. To raise on-farm demand by:
 - a) raising consumer demand through marketing research and penetration, promotion and advertising programmes;
 - b) identifying sub-demands and meeting them through quality control, grading and storage;
 - c) raising derived demand by reducing marketing margins, through vertical integration and rationalised distribution of processing channels.
2. To maximise returns from given on-farm demand, by
 - a) long-run supply restriction using quotas and production licences;
 - b) short-run supply restriction through support buying and diversion of product;
 - c) discriminating marketing via price differentiation in sub-markets to equalise revenues.

The appropriate type of market structure is determined by the objective: type 2 activities present opportunities for non-participating producers to benefit and therefore require a compulsory participation and a marketing board form of organisation; type 1 activities can be carried out by voluntary or co-operative

groups.

Marketing co-operatives account for approximately five percent of farm products in the UK. Possible reasons for the low share of market are that farmers have favoured political means of income enhancement, i.e. price support; economic and social heterogeneity in agriculture dissuades co-operation; during periods of prosperity there is little pressure to improve the market; there has been little government support for co-operatives; there are commercial weaknesses inherent in co-operatives, including democratic control, and managerial philosophy.

Group marketing is characterised by associations of producers for the purpose of marketing improvement (which is not necessarily the object of co-operatives), mostly by type 1 activities. Groups create market power by efficient production, large scale sale of products of appropriate quality, volume and continuity. Marketing groups tend to be strictly commercial, and require capital contribution on entry, and operate as companies rather than friendly societies.

Marketing boards in general were initially set up to circumvent perceived causes of low agricultural incomes, such as the activities of middlemen, poor market information, or poor grading and presentation of product. The intention was to claim the benefits of economies of scale in marketing for producers through large scale organisations with appropriate countervailing power against buyers. Compulsory participation ensured all producers contributed to costs of market intelligence, promotion and research. Boards have tended to adopt type 2 strategies in enhancing incomes by manipulating supply, rather than by improving the operations of the market. Boards also have the function of being a convenient mechanism for the administration of price support schemes. Producers often perceive improved income resulting from price support as an outcome of marketing. Distribution of benefits therefore favours producers rather than consumers.

Commodity Commissions are a post-war alternative to marketing boards, and are charged with identifying the needs of commodity groups for market reform, encouraging co-operatives and groups as the instrument of reform, and creating such special bodies as necessary to carry out research, market reform and development for the industry as a whole.

Type 1 market reform strategies, if aimed at increasing farm income, may have little effect because:

- a) markets are reasonably efficient now, so that there is little chance of large cost economies or supernormal profits being reduced;
- b) quality premiums are relatively small both in volume and value;
- c) if the supply of product is price-elastic and demand price-inelastic (as is typical of agricultural product), benefits from reducing market margins will go to consumers;

- d) some farms or products are not amenable to group or co-operative marketing.

Therefore type 1 strategies are likely to appear unrewarding to producers. The interests of producers are best served by marketing boards exercising monopolistic control over supply and pricing, coupled with price support and/or protection against imports.

3.2 Marketing Boards in Canada: Role, Impacts and Some Elements of Performance:

Proulx, Y

Farm produce amounting to 60 percent of Canadian farm cash receipts was marketed by marketing boards in 1976. Almost all major Canadian agricultural products are regulated by such boards, defined as "a compulsory horizontal marketing organisation operating under government delegated authority". Functions of the boards include negotiating prices, designating sales agents, establishing quotas, and setting transport allowances. The Boards are funded by levies and/or by government. Control can be exercised by producers or state-appointed officers. Marketing boards are categorised into:

1. negotiating agencies, concerned with producer prices and terms of sale;
2. central selling agencies, which sell on behalf of producers; these two types represent marketing boards without supply management;
3. price and volume regulatory agencies, concerned with supply management and price setting.

Marketing boards without supply management increase the bargaining strength of many small producers, with consequent increase in farm price levels, but no discernible effect on consumer prices which are related to import prices. Such boards may have a positive effect on production also. The effect of negotiating and selling intervention is to re-organise the bargaining relationships between producers and processors, allowing the producer a larger share of the final price, rather than to increase consumer prices. Therefore their effectiveness is limited.

Marketing boards with supply management require adequate protection from imports. Such boards increase producer prices but can also have a significant upward impact on consumer prices, as demonstrated when comparing Canadian and United States price movements for eggs and turkey. Stabilisation impacts are less than some workers expect and only occur with supply management. Industry output is generally less, and there is little clear evidence of effects on productivity.

The author suggests that the marketing boards achieve their objectives of improved producer prices and income stability, although sometimes at a cost to the consumer, and moreover the initiative comes from the producer. The most important criticism is that part of the

supply management benefits are capitalised into quota values, which eventually are included in production cost formulas, thereby reducing competitive advantage and reducing consumer benefits for no gain. But as the farm price is a relatively small component of consumer price, the effect would not be great. Reduced competitive advantage could harm export volumes, but as supply management is usually only applied for commodities for the domestic market, this also may not be important. As supply-management agencies can have difficulties in assessing the price which will clear the market, changes in quota values could be used as an indicator of excess profits to producers.

3.3 Supply and Price Control by Producer Groups on the Early Potato Market in Western Germany

Blumencron, HM van; Alvensleben R van

Five producer groups control 25-30 percent of the total supply of early potatoes in West Germany. A quadratic programming model was developed to determine what share of the market the producer groups would need to command, to establish effective price and supply control.

The model assumed:

- a) perfect competition;
- b) pure monopoly;
- c) part monopoly, controlling
 - i) 25 percent of total supply and
 - ii) 50 percent of total supply.

The model showed that the main advantage of supply control under assumption (c) went to the un-organised producers - the free-riders, suggesting that in seasons of large supply, individual producers will tend to break the cartel. Market strategies involving price and supply control by producer groups will only be effective if the groups control a very high market share.

3.4 Market Instability, Stabilisation, and a New Zealand Case Study in Guaranteed Pricing

Rae, AN

A market is said to be price-efficient if price signals freely reach the producer. Unstable prices can distort these signals when fluctuations obscure a price trend, leading to misallocation of resources. Price stabilisation measures often aim to stabilise both price and incomes, but unless the price elasticity of demand is less than one, this does not necessarily follow. Income stabilisation will stabilise prices only if the demand curve is stable but inelastic and the supply curve shifts. If demand should be elastic, income stabilisation will destabilise prices. Conversely, price stabilisation measures will destabilise income if the demand curve is elastic.

However, where price and income instability is due to large supply shifts, and the demand curve is nearly stationary and inelastic,

guaranteed income schemes can achieve price and income stabilisation simultaneously.

Suggested income stabilisation policies involve guaranteeing either producer prices or aggregate industry payouts, calculated as some function of past prices or industry incomes, with surplus funds diverted into a buffer account. The relationship between aggregate and individual income stability is also discussed.

Price and aggregate income stabilisation policies are alternatives, depending upon the problem to be overcome. Price stabilisation may guide reallocation of resources; income stabilisation may overcome problems caused by balance of payment variations where most of a crop is exported. If individual incomes are unstable, taxation and other policy measures would be more appropriate.

The activities of the New Zealand Apple and Pear Board are considered in this context. In general, the guaranteed price scheme has overcome problems caused by instability of prices and income, but two further problems are identified:

1. the guaranteed average price does not necessarily reflect the trend in actual average prices, leading to potential misallocation of resources;
2. off-farm marketing costs, chiefly transport, are allocated by applying district differentials to various fruit growing districts. Changes in source of supply and/or markets have also lead to distortions in resource allocation.

Ways of overcoming these problems are suggested.

3.5 Control of Production and Price in Dutch Flower Bulb Growing

Kortekaas, BMM

Market regulations of horticultural products in the EEC have two aims: stabilising producers' incomes at an acceptable level, and stabilising volume of product. Both are achieved by stabilising the market price at producer level, either by controlling supply or by price intervention. In the Dutch flower bulb market, regulation involved production licencing by area, setting of intervention prices to be financed by a production levy, and exports tied to a minimum price.

Production licences restrict the area cultivated, and intervention prices are intended to remove price effects of good and bad years. The intervention price is intended to just cover production costs, but this is difficult to measure. There are two criticisms:

1. Distorted short-term incentives to production are incurred if the intervention price lies between the production cost and the variable costs. But in the long-term, the intervention price has to cover the total production cost.

2. Market intervention affects money turnover in the market, particularly in years of large production surpluses. The amount retained in the market by intervention was calculated by establishing regression equations for export and consumption of bulbs at two levels of price-inelasticity, when comparing market price and money turnover with and without intervention. It was demonstrated that in the years examined, turnover losses without market intervention would have been greater than the cost of intervention even at the least inelastic demand assumption, suggesting that without intervention, ruinous price-cutting would have occurred.

Kortekaas' findings suggest that while price intervention is necessary it is not without shortcomings, such as production-encouraging effects, resentment among producers who are levied but may not use the intervention fund, and inflexibility. Two ways to minimise these effects are:

1. To offset production-encouraging effects, intervention in planting stock could be undertaken. This is only feasible if planting stock is a small part of total production, and if there is a clear separation between planting stock and saleable stock. The effect of buying up sufficient stock to ensure no expansion next year depends on price paid but could be considerably less than the cost of buying up surplus saleable bulbs resulting from increased plantings. Side effects noted are: price-increasing effects on the planting stock market, encouraged expansion of alternative crops with flow-on effects, and increased quality of remaining planting stock with associated yield effects.
2. Another means of offsetting production-encouraging effects would be to assign rights to sell surplus stock to an intervention fund. These rights could be allocated on a per hectare basis and individual producers may either use the right or trade it to others.

3.6 An Evaluation of a New Zealand Marketing Board's Supply Diversion Strategies

Rae, AN

The performance of the New Zealand Apple and Pear Board as a monopolist in the domestic retail market is examined under two headings. Firstly, the diversion of supplies from the domestic retail market to processing markets; and secondly, the distribution of retail sales over the year through storage. Rae observes that the Board's policy is to benefit consumers and therefore pricing and storage strategy, while increasing total revenue, are not profit-maximising.

Two hypotheses were tested:

1. that the board seeks a policy which does not maximise net revenues;
2. that a policy of price stability has increased consumer welfare above that obtainable under profit-maximising conditions

Total net revenue and consumer surpluses were estimated under three sets of conditions:

1. actual Board pricing policy;
2. profit-maximising policy if the Board acts as a monopolist;
3. perfectly competitive conditions (quasi-competitive conditions).

Estimates of total net revenues revealed a significant difference between actual Board policy and profit-maximising policy (significant at 10 percent or less in all years from 1968-75) suggesting that hypothesis 1 could not be rejected.

Estimates of consumer surplus under different pricing policies showed that while there were relatively small differences in surplus under Board policy or quasi-competitive conditions, consumer surplus under Board policy exceeded that under monopolistic pricing by 20-55 percent. Therefore hypothesis 2 also could not be rejected.

Rae notes that although the difference between actual and maximised revenues is highly significant, the mean value represented only 10 percent of the Board's revenues; and by foregoing this, achieved an increase in consumer surplus of 40 percent. Differences between total net revenues under quasi-competitive and Board policy ranged from + 3 percent and were not generally significant; consumer surplus differences ranged from -9 percent to + 13 percent.

Examination of supply diversion strategies included testing the hypotheses:

1. the price of direct-sale apples is determined by the quantities allocated to processing by the Board;
2. the volume of fresh sales is determined jointly by the Board pricing, direct sale prices, the price of substitute fruits (pears), and personal incomes.

Net revenues were estimated for two years if 25 percent or 50 percent less fresh fruit had been diverted to processing, giving higher fresh volume and lower price. A loss in net revenues of \$0.5 or \$2 million was indicated - a substantial effect on net trading profit.

Rae concluded that the Board has not pursued a monopolistic pricing policy, and has achieved considerable gains for consumers at relatively small cost to growers. However, a near-perfectly competitive situation would achieve a similar outcome. Therefore the Board has had relatively little effect on prices by controlling fresh sale price, but diversion strategies have resulted in considerable short-term gains. Rae concludes that pricing policy has led to an increase in direct-sales volume, which reduces the Board's share of the fresh market. Direct sellers benefit from Board policy without sharing the cost of processing facilities. Also, the Board is producer-dominated; the level of transfer payment from consumer to producers is therefore decided by producers.

3.7 The Role and Performance of Statutory Marketing Organisations

Rae, AN

This paper discusses the strategies that marketing boards often adopt in the pursuit of the objectives of maintaining or increasing prices and incomes received by producers, reducing fluctuations in such prices, and equalising market opportunities and returns among producers. The effectiveness of policies in pursuit of increased producer prices and incomes are considered under the following headings:

1. by raising the level of on-farm demand;
2. by maximising returns from given levels of on-farm demands;
3. by providing technical assistance to raise farm incomes;
4. by enhancing the effectiveness of producers' bargaining power.

The effectiveness of marketing board activities in stabilising prices and incomes, and in equalising market returns to producers, is also discussed. Rae reviews the findings of other workers and concludes that while marketing boards have typically experienced positive results in terms of integrating the activities of diverse farm and agribusiness firms, in marketing in a competitive environment, in achieving economies of size, in implementing market information services and grading standards, in achieving gains due to bargaining power and in the provision of technical services, many such gains could be achieved with alternative market structures and institutions. Areas in which marketing boards as such can be more successful than private industry include integration and co-ordination of production and marketing decisions, the use of bargaining power and possibly in export marketing. Rae suggests that other functions that Boards often carry out such as providing income support, stability and equity should be the concern of government. In order to clarify the role and value of agricultural marketing boards in New Zealand, it is suggested that several questions need to be addressed by economists. These include an examination of the nature and size of gains due to intergration and co-ordination that could not be achieved by a private market, and an evaluation of a monopoly exporter system versus a system of possibly licenced numerous exporting firms. Other issues to be addressed involve comparisons of the performance of marketing boards against other marketing institutions of comparable size in a similar market.

MARKETING OPTIONS

4.1 Getting Farm Products from Farm to Consumer: The System and the Issues

Breimyer, HF

American farmers feel cut off from marketing and also feel they are at its mercy, possibly because it is intangible, and maybe because it is a necessary 'evil' that can make the difference between a good return and a bad one. They also view marketing as the 'middleman'. Breimyer points out that so much misunderstanding calls for a description of what the marketing system does consist of.

The system is big, it is mixed, and can be both efficient and inefficient. It is also where market powers converge and focus. The ultimate goals for marketing are set by society and include high operating efficiency, and enough competitiveness that prices will be fair to both consumers and producers. To achieve these goals, society desires a structure that will itself fulfil the performance goals set for it. For the system as a whole to work well, a firm's goals must be compatible with goals for the system.

Describing the marketing system, Breimyer uses examples of returns, merchandising and concentration. In round terms marketers got two thirds of consumer food expenditures in 1975 and farmers one third. However, that approximate third may be misleading because Breimyer estimates that 23 percent is actually returned to suppliers of farm inputs, which leaves the farmer with 12 percent of food expenditures. There is an increasing part of the marketing system that is industrial, where merchandising dominates. Farm products are highly processed, sold by brand name and advertised, with usually a high marketing margin and comparatively low returns to the farmer. Unprocessed products such as livestock, dairy and poultry are sold with minimum processing and merchandising cost and effort. This product-oriented marketing returns a large share of the consumer's dollar to producers.

Highly processed products tend to also have highly concentrated industry (high percentage of output by few firms). For example, one extreme is breakfast cereals with 90 percent of output by the four largest firms, while in meat packing the equivalent figure is only 22 percent. Also the distribution of retail price differs: for breakfast cereals farmers got 10 cents of the consumer's dollar, and for broilers they got 54 cents. Breimyer feels that the marketing of breakfast cereals is too costly, especially since advertising costs are twice that of the actual raw material.

In concluding, the author states how the farmer's marketing of his product differs so much from the rest of the marketing system past the farm. He goes on to suggest ways that farmers can relate their marketing better to the system as a whole. More responsive pricing systems, vertical integration, countervailing power (co-operatives),

price supports and assured market outlets are illustrations of these methods.

4.2 Horticultural Marketing Co-operatives: the Scope for Large Scale Organisation

Kirk, JH, Ellis, PG

Chapters two and three outline the present structure of horticultural marketing co-operatives in the UK, and general arguments for and against associative arrangements.

The objectives of co-operatives have to be considered in relation to the circumstances of the country. In the United Kingdom, horticultural co-operatives supply 11 percent of the commodity markets. Sales on open market are still the dominant form of disposal. The United Kingdom is a relatively small country, with a temperate climate, and producing and consuming areas are well intermixed. Therefore transport and storage have not represented major concerns to producers.

Various forms of associative arrangements are discussed, including second-tier co-operatives, mergers and consultative or sharing arrangements. Most of the advantages of associative arrangements consist of economies of scale in selling. Economies of pooled purchasing are exhausted at a level of 20-30 growers. Larger organisations can better organise technical services to producers, and enable continuity of supply, market presence and presentation to be maintained, while reducing uneven distribution of product through markets. Transport costs can also be reduced, although there appears to be little to gain from large rather than small organisations up to the point of the packinghouse.

Because of the allocative tasks of large organisations, management at second-tier level is likely to have access to more market information, and be better equipped to appraise it than management at first tier level. Management skills can be distributed over a wider range of produce, which is beneficial if managers are adequate to their task. An improved flow of technical information concerning cultivar selection, production, markets and prices resulting from mobilising and pooling information is the principal economy available to larger organisations.

If the market share held by a co-operative organisation in a commodity sector is relatively small, the degree of organisation among producers will have only marginal effects on market power. There is more to be gained by meeting buyers' requirements than by negotiating better terms.

Disadvantages associated with larger organisations include:

1. loss of immediacy at first-tier level, where marketing decisions for some products need to be made quickly.
2. risk of developing a bureaucratic and unwieldy administration.
3. dilution of producer support, involvement and control.

4. loss of autonomy at first-tier level.

The advantages and disadvantages of large-scale organisation carry different weights depending on the commodity concerned. Less perishable crops, with precise product specification (implying concentration among buyers), and concentration of growing areas, are better suited to marketing through large organisations. Highly perishable crops which are sensitive to weather and have widely dispersed production, packing and selling points, should be marketed in a less centralised manner.

4.3 Integrated Horticultural Production and Marketing

Taylor, WR

This paper describes the co-ordination of crop production and distribution to meet customers' requirements in an industry operating under generally unstable and unprotected producer prices. Reference to outdoor salad and vegetable crops is made. A number of changes in the producers environment are outlined such as increased crop yield, improved crop management techniques, location further away from cities due to improved transport, competition from imports, an increase in chain supermarkets and decline in independent retailers, and an increase in prepackaging. "These changes mean that producers must be efficient, flexible, and aggressive to both retain and expand customer accounts."

Before producers' interests can be co-ordinated within a group it is imperative that the company's directors assess the potential of the present plans of major growers and how these may fit into a co-operative marketing plan.

In the ideal situation producers should only establish the volume of crops required by their customers. However, climatic conditions may often affect yields, so technical staff are required to plant seed type, plant density, disease control, fertiliser levels, rotational patterns and spread of crops over geographical areas and soil types. Thus continuity of supply to customers is maintained. Specialist marketing staff are also required for feedback of wide ranging and changing customer requirements. The author concludes that "business is likely to remain ruthlessly competitive in the foreseeable future and intense pressure will remain upon co-operative marketing and technical staff, both from their customers and members who rightly argue that the overhead costs of production are not being recovered in the present market structure."

4.4 Marketing Options for Farmers

Forker, D

Forker outlines examples in the marketing systems of various agricultural products where farmers are dissatisfied with price-quality mechanisms operating. He asks the question; "Is there a better way?" (for farmers to market their products). The expectations of farmers,

agribusiness and consumers are described and the implications of these expectations discussed.

The farmer expects the best possible price from a system that treats him and his fellow producers equitably. He also expects adequate prices in view of production costs, and adequate rewards for his contribution of capital, labour and management. Lastly he expects personal freedom as an entrepreneur (or the options to make decisions). Small agribusiness firms probably have the same expectations as farmers. Large agribusiness firms are concerned about maximising profits and growth. Consumers expect adequate supplies of all major food items at stable price levels and a food system that is efficient, accountable, and responsive to their desires and complaints.

The implications of these expectations is that a marketing process cannot be all things to all people. Thus farmers considering new marketing alternatives must propose a system that meets their aspirations as well as those of agribusiness. Alternatively the system must give farmers enough muscle to withstand the economic and political power of agribusiness. The system must also meet the aspirations of consumers or face the possibility of political defeat.

Forker goes on to propose eleven marketing options that he considers worthy of consideration. The first four are institutional changes designed to make an open free market work better. They include "electronic commodity markets" that use telecommunications and/or computers to bring large numbers of buyers and sellers together. "Vertical co-ordination through forward contracting" would help to determine a 'fairer' price. "Forward deliverable contract markets" would establish a formal market for production contracts, and "mandatory public reporting of market information" is also a pre-requisite of a competitive private market economy.

The next five options are designed to close or limit markets and to exercise some degree of control over marketing and/or prices. "Exclusive agency bargaining" would involve farmers of a certain commodity voting to decide whether they wanted to form a bargaining unit. "Joint ventures between agricultural co-operative and non-co-operative marketing firms" and "vertical integration through ownership" would involve farmers more in the physical process, but must be carefully evaluated as to the benefits/costs. "Marketing orders" could be improved in a number of ways (Forker gives ten examples). "Marketing boards" are suggested as a solution to grain export problems, provided they are set up so as not to raise domestic prices and interfere with current agribusiness firms operations.

The last two options are sweeping and represent two extremes. The first, "Fine turning" says "Lets do a better job with the legal authority that now exists" and the second, "Industrial Restructuring" says "Lets pass stronger anti-trust legislation and break the large corporations (where business is too concentrated) into smaller units for greater competition."

Forker concludes by saying that the present US marketing system should not be condemned. He says it functions more efficiently than any other in the world. The question "Is there a better way?" is the reason for this and should be continued to be asked, as well as

considering the complaints, the desires and the options.

4.5 Marketing Alternatives and Resource Allocation: Case Studies of Collective Bargaining

Lang, MG

This paper examines case studies of contract revisions prompted by collective bargaining, analyses their resource allocation consequences, and offers an explanation of why those revisions did not come about in the absence of collective bargaining. It concludes that the revisions led to a reduction in joint costs of production and processing and argues that collective bargaining was one of several factors that may have prompted contract revisions.

These findings support the claim that there are fundamental differences in the resource allocation consequences of alternative vertical co-ordination mechanisms. They do not permit a conclusion that collective bargaining is necessarily a desirable alternative. They do offer evidence that one dimension of co-ordination may be improved through collective action.

4.6 Bold Steps Farmers can take through their Organisations to Improve Marketing

Jaenke, EA

The experience of approximately 10 southwest Kansas wheat farmers is outlined from the point of their decision to find a 'specialist' to market their wheat. They approached a Kansas co-operative that handles a good share of the wheat in Kansas and Colorado. Consequently the author's firm and the executives of the co-operative got together to develop a more sophisticated wheat marketing program. Economic analysis of production patterns, quality, transportation, and historical factors was carried out, as well as a review of marketing pools that had been tried in other agricultural commodities.

They concluded that specialists do a better job of marketing than farmers. Also, there is an advantage in selling large quantities both in terms of market power and market efficiency in meeting customers needs. This pool type program has the advantage of early and long term sales commitments, and reliable supplies for markets. The farmer commits his crop at planting time to be delivered to the marketing pool. The manager of the marketing pool can rationalise harvesting by regions and transportation. The farmers gain the margin available at the former middleman level, because the pool does not make a profit. By covering a large area, crop failures are not likely to have a major effect on the pool. The author concludes by saying that usually the various pools in existence have shown a gain to the farmer.

ANALYSES OF MARKETING PERFORMANCE

5.1 Markets and Prices in Today's Agricultural Economy

Breimyer, HF

Professor Breimyer considers various definitions of price and offers his own, that price is the "culmination of negotiating between sovereign entities, definitely not performed under duress, resulting in the transfer of entitlement to a good or service". He suggests that the main feature of a market system is the sovereignty of traders, and that for a market system to fulfill welfare criteria, equity or equivalent bargaining power must also exist. Subunits within a vertically integrated organisation do not possess sovereignty, and goods are transferred within the organisation at shadow prices rather than true prices.

Secondly, in a market system, price must dominate all other elements in a transaction. This does not occur in agricultural marketing systems, where price of farm products is highly significant to farmers, but not necessarily the most significant element to processors.

An idealised price-powered market is of the marketing clearing variety. Much of today's price system is based on administered price, which requires that the price-setter has market power. As well as its distributive function, price is also required to allocate factors of production and determine the distribution of income generated. There is no justification for assuming that the distributive efficiency of price automatically means efficient factor allocation and income distribution.

Breimyer proposes three necessary conditions if a price-powered market is to be relied upon:

1. Sovereignty of the economic unit
2. Relatively easy access to physical resources on non-discriminatory terms
3. Individual production techniques as the ultimate equaliser of income distribution, i.e. constant returns to scale.

When these conditions prevail, marginal cost pricing genuinely attaches a product price consistent with costs of production and minimises rent (producer surplus). The more these conditions are violated, the steeper the slope of the aggregate cost curve, and the greater is the proportion of rent. Therefore, the steeper the slope of the cost curve, the more socially unacceptable is marketing pricing as a force of income distribution.

Depletion of resources such as fossil fuels, metals and farmland results in sharply increasing cost curves, which under marginal cost pricing yields very high rent returns to established sectors of each industry. It is suggested that in this situation, Keynesian-type fiscal stimulation adds little to productivity but a great deal to the asset value of resources, which in the case of farmland can make land holding more attractive than land operating. Because the second condition is increasingly violated, the role of price will decline as a means of guiding sectors of the economy which are sensitive to depletable resource use, including agriculture.

5.2 Agricultural Selling Cartels: Relative Co-operator and Non-co-operator Gains

Piggott, RR

Supply-restricting agricultural selling cartels often benefit non-co-operating producers more than co-operators. It should therefore be recognised that producer-controlled marketing boards are not always suitable to all marketing situations.

Conventional economic analysis suggests that a supply restricting cartel will inevitably fail if non-co-operating producers are present, assuming that co-operators and non-co-operators have identical cost structures. However, some cartels survive, suggesting that this assumption is inadequate. Piggott suggests that the co-operation of a producer depends on the ratio of benefits he would receive by co-operation to those received if he did not, and that the parameters of the frequency distribution of this ratio could provide a means of predicting the long-run stability of a cartel.

In a supply-restricting cartel, the price elasticity of demand confronting the cartel will generally be more elastic than total demand. Co-operator and non-co-operator gains will be greater the greater the reduction in cartel supply and the less elastic is total demand. Gains to co-operators or non-co-operators increase with each group's supply elasticity. But co-operator gains are negatively affected by non-co-operator supply elasticity while the reverse situation does not occur. Therefore total gains will be less as the proportion of total demand met by non-co-operators increases.

The cartel which can provide greater average gains to co-operators than those received by non-co-operators as a result of supply restriction has a greater chance of survival in the long run.

The above analysis, applies to cartels which are price-makers and restrict supply by imposing quotas. Restriction by supply diversion and input restriction, and other price setting arrangements are also examined.

The application of economic theory to determine the economic feasibility of a proposal to establish a marketing board is considered, and important parameters for use in feasibility studies are outlined. There are: the price elasticity of demand for the product concerned, the price elasticities of co-operator and non-co-operator supplies, the ratio of average co-operator to non-co-operator output, and the

proportionate reduction in supply proposed by the cartel.

For some combinations of parameters, non-co-operator gains would outweigh co-operator gains, which would encourage co-operators to leave the cartel. Compulsory membership would be necessary to ensure its survival. However, voluntary cartels can also offer benefits to co-operators which would lift their net returns above those of non-co-operators.

Whether or not a voluntary agricultural cartel will survive can therefore only be determined after a study of the key parameters for each case.

5.3 Evaluating the Performance of Agricultural Markets

Hill, LD

A long-term trend exists of substituting administrative controls for free market forces, either by changes in market structure or government involvement. This results in market concentration either of corporations or government agencies. A free market would not meet the needs of modern US agriculture. It therefore is important to determine the effects of public and private actions which move the market along a continuum between free market and administered price systems.

Corporate control of markets is premised on the statement that large organisations require planning, which in turn requires corporate control of market forces. Hill challenges this statement and suggests that planning is also necessary for small firms; and that the difference between large and small firms is their ability to use market power to avoid the consequences of planning mistakes. Means of escaping the discipline of the market include manipulating consumer preference, transfer of losses to other products, exclusion of substitutes in the markets, and use of political influence. Corporate control of markets cannot guarantee efficient and profitable operations unless economic power extends to control of consumers and substitutes. In Agriculture, government is increasingly involved in providing an equivalent to corporate control of the market. Government policy actions, which are often based on ideological rather than economic principles, have economic consequences which are seldom clearly identified. The cumulative effect of policy action on world markets in terms of trade barriers, cartels etc has caused further reliance on government and less on market forces, but there is a general lack of means to evaluate the effect of government action in terms of net welfare. Economists by evaluating market performance could identify trade-offs between various policy alternatives. Hill proposes an evaluative procedure which could achieve this:

1. A policy action is separated into the specific marketing functions which could be affected.
2. Criteria are identified on which policy should be judged.
3. Policy is analysed in terms of ability to move in relation to goals implied by the criteria.

Hill suggests four criteria and applies them to the US and Canadian grain industries as follows:

1. Efficiency, i.e. the performance of basic marketing functions at lowest resource cost. However, it is noted that while market discipline enforces operating efficiency, the private cost of investment losses should not be ignored.
2. Price level and price stability. The role of price is to allocate goods and resources in a market. However, these can also be allocated by government. Marketing boards do not always increase farm prices; for example the Canadian grain marketing boards have not gained any consistent premium for producers over the prices received in the US for grains. However, marketing boards can stabilise prices.
3. Response of changing demand and supply. Responses to even small price signals is rapid in the US grain industry, which has large numbers of individual producers, but market board systems often have difficulty responding to fluctuating demand and can lose market shares as a result.
4. Incentives to increase production. Policies can influence yields and associated production cost. The free market has a clear advantage in terms of rapid production response, but as it can result in over production it is not clear whether a controlled or free market is more efficient.

Hill concludes that substitution of administered decision making for market forces will tend to increase price stability, decrease marketing efficiency, decrease resource responsiveness, and have little effect on price levels in the US grain industry. He acknowledges that there are objectives of society which cannot be met through a free market system, but suggests that because of diversity of opinion, government policy will move towards increased welfare for producers and consumers very slowly, if at all.

5.4 There is Method in my Madness: or is it Vice Versa? Measuring Agricultural Market Performance

Harriss, B

A number of studies of research into developing countries' economics of agricultural marketing are reviewed. The methodology used is usually "structure, conduct, performance" analysis, which is a standard tool for market analysis in the USA and UK. Market structure consists of the characteristics of the organisation of a market which influences the nature of competition and pricing (degree of buyer and seller concentration, entry conditions etc). Market conduct is the pattern of behaviour which enterprises follow in adapting to the markets in which they sell or buy (price determination methods, sales promotion, competing tactics etc). Market performance represents the economic results of structure and conduct (relationship between distributive margins and costs of marketing services, and time series price data to show degree of competition in marketing systems).

The author concludes that the majority of the studies reviewed "display a serious lack of logical relationship between the data presented and the conclusions derived". The conclusions drawn are confusing and more research along structure, conduct, performance lines will only resolve this confusion if it is consistent.

"The polar assumption that markets are either perfectly competitive or monopolistic is clearly false ...", and "a competitive market may be necessary but it is clearly not sufficient for the maximisation of productivity." The author finishes by concluding "A question mark must be placed not simply beside the methodology of conventional agricultural marketing economics in the structure, conduct, performance tradition, but also beside the history of the interpretation of the results."

SECTION 6

THE EXPORT MARKET ENVIRONMENT

6.1 The Agricultural Marketing Agenda for the Eighties

Ward, RW

Marketing research is directed by changes in the marketing environment. Four areas of change are:

1. Changes in supply and demand conditions such as the economic environment, and consumer preferences.
2. Increasing need for an international perspective on trade.
3. Business research may be less attractive if the need for confidentiality prohibits recognition and rewards to the researcher.
4. Changes in the support base (funding) will influence the content and orientation of research.

Changes to consumer preferences have led to more processing and more away-from-home consumption, with consequent restructuring of the distribution system.

Changes to the economic environment include further concentration in the producing sector, with factor and product markets becoming "thin"; increasing US reliance on world markets; with changes from a situation of chronic agricultural surpluses to one of limited supplies. Global demand for food products could expand to near record rates; while global food production could contract to 75 percent of historical rates. Few countries will be able to support their increased consumption.

Marketing research requirements are discussed under the following headings:

1. The Pricing Process - including further theoretical analysis of thin markets, forward markets and electronic markets.
2. Transportation and Distribution Systems - including analysis of structural changes.
3. Institutional Changes - including further studies of marketing orders, co-operatives, trading associations, and marketing boards as the institutional mechanism for international trade.
4. Market Concentration - the structure and performance of agricultural markets, their effect on price and economic welfare, and measures of economic performance of increasingly concentrated organisation.

5. Information Controls - promotion programs, and the communication process in general.

The author concludes that with increasing demands on supplies and distributional services, communication becomes more crucial, and the researcher should provide communication leadership.

6.2 Exporting Problems and Organisational Structures

Rae, AN

A summary of current trends in international trade in horticultural products is presented, including:

1. Increasing protectionism in horticultural products, particularly from the EEC and Japan;
2. Increasing export availability of horticultural products, indicating reduced export prices in the medium run;
3. Institutional changes by other countries to strengthen their market presence.

The New Zealand horticultural export industry is examined. Data presented show that 75 percent of revenue is earned by apples and kiwifruit, 63 percent of sales (by value) is handled by three firms, and 80 percent of revenue is derived from only four market regions. Rae suggests that exports of kiwifruit and apples are relatively well organised, and it is the minor products which are experiencing problems. Features and problems of minor product exporting include:

- little formal integration or agreements between producers and exporters;
- some weaker buying and selling strategies due to market uncertainties;
- use of foreign selling agents;
- some co-operation and some competition in transport;
- lack of commitment and/or resources for effective promotion, research and development;
- lack of long term market intelligence and information on new markets.

Rae discusses the structure and organisation of firms in the horticultural marketing channel under the headings of co-ordination, competition and conflict. Co-ordination of channel members to optimise benefits may be poorly served by the price mechanism, because of imbalance of power and noisy signals. Other co-ordinating mechanisms may be necessary, such as co-operatives, contractual agreements, voluntary joint ventures and other forms of horizontal and vertical integration are considered.

Gains from competition are likely to be shared between the producing country and its markets, unless exporters agree to co-ordinate activities in overseas markets, while continuing to compete on the domestic market. Rae suggests that the "weak seller" is not necessarily rational in quitting product at a lower price, but may not have the resources, market strength or information to successfully participate in the market. He recommends that a single-seller approach to exporting is desirable.

Conflicts within channels are caused by different goals and different power bases of channel members, and can impair economic performance of the channel as a whole. Conflict medication is best carried out by independent committees such as the Horticultural Export Development Committee, with a view to meeting channel goals rather than firm-specific goals.

The paper concludes by speculating on the future role of existing large exporters with regard to minor products. These firms may have little commitment to minor products, may not make marketing decisions in the best interests of minor exporters, and may suffer reduced efficiency if they do become less specialised. If so, joint programs among specialist exporters of minor products may develop. Rae suggests that the trend to increasing specialisation, emergence of few firms with large turnovers, and joint programs between these firms will result in the formation of a single producer controlled exporting organisation dominating the horticultural industry in New Zealand.

SECTION 7

ECONOMIC AND MARKETING THEORY

7.1 The Economics of Agricultural Marketing: A Survey

Breimyer, HF

Three different schools present definitions of agricultural marketing. The first, Breimyer calls the "What happens" school - derived from the economics of the farm business, it defines marketing as all that happens to products past the farm. The second school extends this definition to include marketing as the seat of co-ordination and direction of economic activity, and the third school focuses more on the processes of cultivating demand rather than on farm products, as they enter the market stream ('market development' school).

These three schools of thought on marketing can be traced back to different origins. The "what happens" school originated where marketing was regarded as a mere extension of the farm business. Farm management was one of its progenitors. Neo-classical economic thought then hastened the emergence of the co-ordinating-role school of thought. The market development approach to marketing was derived partly from depression-born Keynesianism and latterly to the success of business schools in elevating merchandising ('marketing') to an academic discipline.

The economies of collective action in agricultural marketing has a long history. Both farmers and consumers have embraced co-operatives in the past to correct apparent marketing ills. Breimyer describes the various works that compare co-operatives to business enterprises, as well as those commenting on horizontal and vertical integration by co-operatives. The techniques of management (or lack of) of co-operatives have also been written about, as has the concept of the suitability of co-operatives as 'adaptive' institutions. Mandated co-operation is examined in the form of marketing orders and boards, and lastly collective bargaining is discussed as a means to establish price and other terms of delivery.

Efficiency in marketing is discussed in terms of:

1. how well the system allocates resources and distributes proceeds and,
2. the operational efficiency of individual market organisations.

Breimyer states that after a half century of analysis there is no consensus as to the best method for examining the allocative-distributional operations of the marketing system. Usually only one aspect of the multi-faceted system is selected for analysis, often on the basis of an accusation of malfunctioning. Commodity price analysis concentrates on the supply, demand and price of farm products. It remains mostly predictive. Studies of marketing costs and margins

are both simple and sophisticated, and usually arise from the age old notion that middlemen extract too much profit. Breimyer rounds off his survey of the studies of efficiency in marketing by commenting that such studies often move rather hastily into the economics of imperfect competition. This usually embraces concentration in each industry and the extent of product differentiation that prevails. He goes on to discuss in this area; concentration in markets, product differentiation, the price-discovery mechanism, vertical integration, structure-conduct-performance and game theory.

The second area of efficiency in marketing relates to the operating efficiency of the 'firm'. Efficiency relates output to input, but quantifying these is difficult. Recognising that choices exist between resources (inputs) and products (outputs) also complicates matters. Moreover, is efficiency to be judged in terms of the 'firm' or of society?

The area of demand creation and market development is discussed mainly from United States references and concerns those private and public policies that arise from either over production of farm products or under nutrition of a market segment. Supplemental food programmes for low income consumers which directly distribute food or allocate multiple prices to it, have been studied more and more in recent years. Consumer Preference Studies are a product of post-war activity in farm product marketing in the United States and a mass of literature is available. Data can be related to upgrading standards for raw farm products, possible product differentiation and possible new products. The results of research into the effectiveness of consumer-oriented advertising and promotion is eagerly sought after by various commodity organisations and food processors. Broad results are that the more distinctive a product, the more shiftable is the demand curve. Also, superior goods are more responsive to advertising than inferior goods.

Transportation and regional economics as an aspect of agricultural marketing originated fairly early (Von Thunen, 1875). The majority of regional economic studies were simulated, that is, models. As long as transport costs approximated actual costs, Breimyer considered these models could be regarded as marketing studies.

The final area of discussion in Breimyer's review is about macro-structural studies. He considers that it is really only in the last decade that economists have ventured into overviews of major sectors of the marketing system - or of the entire system. They invariably seek to define (or re-define) the role of government. Pressure of recent events (e.g. the European Common Market) is the main reason Breimyer thinks these studies have come about. He also thinks that the knowledge from these studies needs to be amalgamated to guide the structuring or restructuring of markets. He asks for solutions to the questions "How well does the contemporary system work, and what are the problems, and the aspirations for the future?"

Breimyer also cautions about being too comprehensive in terms of macro-studies of marketing, especially when looking at developed and developing countries. "In large measure institutions of marketing are time-dynamic and culture-specific".

7.2 Economic Theory of Bargaining in Agriculture

Helmberger, GP and Hoos, S

The authors consider the bargaining environment for agricultural commodities and its participants, and some theoretical approaches to bargaining. Without a bargaining association, the industry is characterised on the selling side by atomistic competition and free entry. A bargaining association of individual producers can become a dominant seller, depending on the size of the market segment and controls.

With the introduction of a bargaining association into the structure of a market, there is a need to develop a theoretical basis for describing the relationship between the structure, its conduct and performance. The authors consider several approaches, including bilateral monopoly theory, and two game-theory solutions in which Pareto-optimality and other criteria are required in the outcome. However, some aspects of reality, such as ignorance, uncertainty, aspirations and judgements of the bargaining parties have been assumed away, and therefore the relationship between structure and performance has not yet been adequately defined.

Some economic implications of co-operative bargaining and its potential for price enhancement are considered in two cases: in the short run with fixed membership; and in the long run with membership allowed to adjust to induced market changes. In the first case, price enhancement will follow only if price elasticities of demand and non-member supply, and member output: total output ratios achieve certain values. Non-members will also benefit from the price-enhancing effect of association.

In the second case, long-run membership will be influenced by the distribution of short-run benefits. There is an incentive for members to withdraw from the association without loss of benefits, unless there are a few large firms who recognise their interdependence and hold the association together, or there is an industry-wide government programme.

Therefore, long run price enhancement via co-operative bargaining requires some monopolistic or monopsonistic elements to succeed. The paper concludes that co-operative bargaining associations have a useful role for certain markets and certain products, e.g. processing fruits and vegetables, fluid milk, sugar beets, but that this role is limited.

PART TWO

SECTION 8

CHARACTERISTICS OF DOMESTIC AGRICULTURAL MARKETS

The literature indicates that unorganised agricultural markets are characterised by:

1. Long-run surpluses of some products, often as a result of price interventions by government;
2. Low rates of growth in aggregate demand due to low or zero population growth;
3. Relatively low price and income elasticities of demand on the domestic market;
4. Relatively high price elasticities of supply;
5. Wide fluctuations in price inherent in the imbalance in rate of growth of demand and supply, and low price elasticity of demand;
6. Large numbers of producers and consumers with few intermediates.

Many authors appear to have assumed that unsatisfactory returns to the agricultural sector are a consequence of marketing deficiencies. However, TK Warley (1967) challenges the proposition that inadequate incomes in agriculture are caused by marketing deficiencies, and suggests that low returns to resources are due instead to yield-increasing technological advances, low price and income elasticities of demand, and inadequate rates of movement of labour away from agriculture. He contends that while agricultural market systems are not perfect, they have some of the characteristics of efficient marketing, in that profits, margins and costs are all kept fairly low by competition. However, he acknowledges that ambiguous price signals, price instability, perishability of product and distribution costs are a problem, and some intervention by government or organised producer groups may be beneficial.

FACTORS WHICH DETERMINE MARKET STRUCTURE

Market structure consists of the "characteristics of the organisation of a market which seem to influence strategically the nature of competition and pricing within the market" (Bain, 1959). These include the ease of entry to and exit from the market, the degree of seller and buyer concentration and their organisation into vertically and horizontally integrated forms, and the extent of product differentiation.

Some factors which determine market structure are as follows:

9.1 Distribution of Market Power

In unorganised agricultural markets, the optimal plant size of processors and handlers results in relatively few of these first-level intermediaries being necessary to absorb the output of a large number of producers. Market strength is closely related to the volume traded in any product, and the outcome of this imbalance is that the first-level intermediaries become the price-makers in the market. The producer and consumer, having both the greatest numbers and least bargaining power, are the price takers. While price is highly significant to the producer, it may not be the most significant element of the transaction to the processor or handler; therefore voluntary horizontal intergration by producers to exert countervailing power results in the formation of various associative arrangements.

Montigaud et al (1978) contend that market organisation follows a distinct process, from the voluntary grouping of producers of a commodity as outlined above, through enlargement of the organisation, eventual compulsory membership and international co-ordination, to vertical integration encompassing shipping, wholesaling and processing. Highly evolved forms of market organisation depend on, although are not necessarily associated with, high levels of economic development.

9.2 Price Formation Processes

The necessary concentration of first-level intermediaries favours the substitution of an administratively determined price for the market price. The activities of large private organisations in the market can have an effect similar to that of government intervention. Large investments encourage the firm to increase its control over the market to minimise risk. Hill (1982) suggests that large organisations can (and do) use their market power to escape the discipline of the market in the event of planning mistakes. Means of doing this include manipulating consumer preference by advertising, transfer of losses to other products, exclusion of substitutes from the market, and use of political influence. Price-setting behaviour such as this, whether originating from government or private organisations in a market, can move the market along a continuum between free market and administered

price systems.

9.3 Infrastructural Needs

Where producing and consuming areas are separated, either by distance or time, terminal markets in which the price clears the market may not meet the needs of modern agricultural industry. The need for storage, preservation and transport generates a requirement for an infrastructure which can cope. This in turn is likely to be provided only by large organisations, such as producer groups or co-operatives.

9.4 Changing Patterns of Demand

Increasing requirements for further processing, as a result of changing consumption patterns and income levels as well as separation of markets, have led to further changes in the composition of market channels.

SECTION 10

MARKETING ORGANISATIONS

All of the statutory organisations and associative arrangements of producers have in common the general objectives of maintaining or increasing prices and incomes received by producers, reducing fluctuations in such prices, and equalising market opportunities and returns among producers. In pursuit of these objectives, Warley (1967) suggests that two strategies can be adopted:

1. On-farm demand can be raised by:
 - a) raising consumer demand through market research and penetration, promotion and advertising programs;
 - b) identifying sub-demands and meeting them through quality control, grading and storage;
 - c) raising derived demand by reducing marketing margins, through vertical integration and rationalised distribution or processing channels.
2. Returns from given on-farm demand can be maximised by:
 - a) long-run supply restriction using quotas and production licences;
 - b) short-run supply restriction through support buying and holding of stocks, or diversion or destruction of product;
 - c) discriminating marketing via price differentiation in sub-markets to equalise revenues.

Means of stabilising income from given demand include:

1. price support schemes, often self-funded through buffer funds. Alternatively, price intervention can be financed from producer levies or direct assistance from government;
2. supply management, using the same means as for long- and short-run supply restriction, but with the intention of evening out the flow of product on to a market rather than simply restricting its volume.

Other income enhancing strategies are described by Rae (1981) as:

1. provision of technical assistance, often in the form of advisory services giving information and guidance on cultivar selection and production technology, but also in product and market research;

2. policies which increase the effectiveness of producers' bargaining power;
3. quality assurance including specification of size and weight, packing and quality of produce;
4. provision of market intelligence to channel members; and promotion of research programs.

10.1 Statutory Marketing Organisations

10.1.1 Marketing Boards and Marketing Authorities

Marketing boards have been described as "compulsory producer co-operatives" and have been employed in the regulation of agricultural product markets in England, Canada, Australia, New Zealand, West Africa, Israel and the Netherlands. Some but not all boards derive their authority from enabling legislation, and most were initially set up to aid in economic recovery in the 1930's. The objectives of marketing boards, as outlined by Veeman (1979) can be generally stated in terms of improvement in the level and stability of producer returns, transfer of the balance of market power towards producers, and reduction in the degree of market uncertainty faced by producers. These generalised objectives also hold for marketing orders and other forms of associative arrangement, although differing structures, origin of board appointees and source of authority all determine the extent to which such organisations engage in these activities.

Abbott and Creupelandt (1966) classified marketing boards as follows:

1. Non-Trading Boards

- a) advisory and promotional boards, which engage in market research and promotional activities;
- b) regulatory boards which monitor quality assurance and packing standards;
- c) price stabilisation boards, which engage in supply management and/or price fixing and deficiency payments.

2. Trading Boards

- a) price stabilisation boards with trading powers which maintain buffer stocks to stabilise prices;
- b) export monopoly boards, which may act as sole sellers or may appoint agents to sell overseas;
- c) domestic monopoly boards, which act as sole traders and processors, sometimes through agents.

A tendency has been noted (Israeli & Zif, 1977) for advisory boards to take on more executive functions. Board membership is usually weighted in favour of producers, who are elected rather than

appointed. There are some relatively unacceptable aspects to this. Rae (1978) pointed out the inappropriateness of a board whose membership is dominated by producers, deciding the level of transfer payments from consumers to producers. Legislative change is under way in Australia (Campbell, 1979) to limit the number and means of appointment of producers, to marketing boards, on the grounds that a producer does not necessarily have the training or the perspective appropriate to managing a marketing organisation. This is also recognised in the United States, where producers have appointed marketing specialists to administer a grain marketing pool, rather than administer it themselves.

Recognition of the need for producer boards to enlarge their marketing, financial and managerial expertise has led to the restructuring of some Australian marketing boards as marketing corporations, strengthened by appointments from industry, and with extended trading powers.

Marketing boards have tended to adopt strategies aimed at supply management as a means of enhancing and stabilising incomes, rather than by improving the operations of the market. Warley (1967) considers that market reform strategies appear unrewarding to producer organisations, partly because income-enhancing effects are likely to be small, and partly because most of the benefits derived from such reforms are distributed in favour of consumers rather than producers. Marketing boards also have the function of being a convenient mechanism for the administration of government price support schemes.

10.1.2 Commodity Commissions

Commodity commissions in the United Kingdom are a post-war alternative to marketing boards. They are charged with identifying the needs of commodity groups for market reform encouraging co-operatives and marketing groups as the instruments of reform, and creating such special bodies as are necessary to carry out research, market reform and development for the industry as a whole.

10.1.3 Marketing Orders and Agreements

Like marketing boards, marketing orders were originally established under enabling legislation passed in the 1930's to encourage economic recovery. A marketing order is a regulatory program issued by the United States Federal Secretary of Agriculture at the request of growers which legally obligates all commodity producers and handlers to abide by order terms. These typically involve commodity quantity and quality, packing standards, and conduct of research and market development projects. Volume management is implemented through producer allotment and market allocation plans, and market flows are regulated by reserve pools, shipping holidays and "pro-rates" - limitations on the maximum volume a handler may ship over a stated period.

Quality control provisions set minimum grade, size and maturity standards. Market support activities promote more orderly marketing and can include standardisation of packaging, and levying of fees on

handlers to finance research in production, marketing or advertising.

Marketing orders are administered by a nominated committee of unsalaried grower and handler representatives, who recommend regulatory policy to the Secretary of Agriculture. Herein lies the fundamental difference between a marketing board and a marketing order; while a board can have considerable executive powers, a marketing order functions as an advisory committee only; regulations are issued by the Secretary of Agriculture.

A marketing agreement has essentially the same features as a marketing order, except that conformity to the terms of a marketing agreement cannot be compelled.

10.2 Associative Arrangements of Producers

10.2.1 Producer Co-operatives

The co-operative movement accounts for shares of produce markets in Europe and North America, ranging from 11 percent of the total agricultural market in the United Kingdom, where terminal markets are still the dominant form of disposal, to 80-90 percent of throughput in France, Denmark and Holland. Bateman (1979) examines some objectives for co-operatives, including maximisation of joint profit, producer surplus, membership, patronage refunds, throughput and net returns per unit. Non-maximising objectives include encouraging a spirit of self-help, enabling satisficing between price, dividend and capital accumulation, preventing oligopolistic or oligopsonistic exploitation and thereby minimising supernormal profits in the system, and providing a window on reality, to prove to members that exploitation is not occurring as they might suppose. Co-operatives, particularly primary level co-operatives, are democratically controlled by election of officers. As a consequence the quality of management, which is of central importance to the success or failure of a co-operative, can be uneven.

In Europe, secondary and/or tertiary level co-operatives exist, particularly in those countries in which co-operatives have high market shares (Foxall, 1980). Tertiary co-operatives operate at national level, and exert strong, centralised management control over primary co-operatives, thus reducing competition, allowing integration and larger economies of scale, and reducing the democratic involvement of producers in decision-making. Foxall hypothesises that these types of market structure facilitate development and exercise of market power. They have strong marketing strategies and tend to become self-perpetuating corporate bodies. It is suggested that the absence of this type of structure in the United Kingdom accounts for the low co-operative market share.

Some disadvantages in the development of secondary and tertiary co-operatives are noted by Kirk and Ellis (1969), including loss of autonomy and immediacy of decision-making at first-tier level, and dilution of producer support. However, Foxall suggests that for co-operatives to advance the market share of producers it is necessary for some form of oligopolistic marketing structure to exist.

10.2.2 Group Marketing

Group marketing as described by Warley (1967) is characterised by associations of producers for the purpose of market improvement (which is not necessarily the objective of co-operatives), mostly by market-reform strategies. Groups create market power by efficient production, large-scale sale of products of appropriate quality, volume and continuity. Marketing groups tend to be strictly commercial, requiring capital contribution on entry, and operate as companies rather than friendly societies.

SECTION 11

ANALYSIS OF THE PERFORMANCE OF STATUTORY MARKETING AUTHORITIES

It is generally agreed that the basic theoretical constructs to describe the activities of statutory marketing authorities in domestic and international commodity markets are inadequate. In addition, government policy actions are often based on ideological rather than economic principles, the economic consequences of which are seldom clearly identified. The cumulative effect of policy action on world markets in terms of trade barriers, cartels and restrictive agreements has caused increased reliance on government rather than on market forces, but there is a general lack of means to evaluate the effect of government action in terms of net welfare. Nevertheless, aspects of the performance of marketing authorities have been subject to scrutiny by various workers and some of their findings are discussed in this section.

While producers' objectives of higher, stable prices and incomes may be achievable by the activities of producer organisations, government has a role in ensuring that national objectives are also met. Izraeli and Zif (1977) suggest that a marketing system in a complex economy needs to:

- a) allow for competition while minimising its dysfunctional aspects;
- b) provide better co-ordination of goals when the market mechanism is an insufficient guide;
- c) enable social objectives such as consumer interests, environmental issues to be considered, without losing the benefits from entrepreneurship and competition.

Other works have re-stated these requirements such that the legitimate concern of government regarding marketing include enabling:

- a) the efficient allocation of resources (factors of production),
- b) the equitable distribution of the income thus generated,
- c) the efficient distribution of product.

Performance of the food marketing (OECD, 1979) system should be measured by the same criteria as the economy as a whole. Therefore, policy makers need to establish the rules governing the price-formation process which will generate as nearly as possible the outcomes they prefer. Price efficiency in food marketing systems will clear the market in the short term, and in the long term will fully reflect consumer preferences and the costs of production.

Some evaluations of the extent to which market organisations, in the pursuit of their own goals of price and income enhancement do or do not meet these requirements are outlined in the following

sub-section.

11.1 Price and Income Enhancement, Stabilisation and Economic Efficiency

A market is said to be price-efficient if price signals freely reach the producer. Unstable prices can distort these signals when fluctuations obscure a price trend, leading to resource misallocation. Rae (1976) notes that price stabilisation measures often aim to stabilise both price and incomes, but unless demand is relatively price-inelastic, this does not necessarily follow. Income stabilisation measures will also stabilise prices only if the demand curve for a product shifts over time, or if the demand curve is stable and inelastic, and the supply curve is shifted. If demand should be price-elastic, income stabilisation will destabilise prices. Conversely, price stabilisation measures will destabilise income under conditions of elastic demand. However, where price and income instability is due to large supply shifts, and the demand curve is nearly stationary and inelastic, guaranteed income schemes can achieve price and income stabilisation simultaneously.

Administered pricing policies can therefore overcome problems of low or unstable prices under certain conditions, but various effects have been noted. For example, Kortekaas (1978) in a study of control of price in the Dutch flower bulb market observed that while price-setting and production control had a beneficial effect on money turnover in the market, distorted incentives to production also occur. Production-encouraging effects also increased prices in the planting stock market, encouraged expansion of alternative crops with flow-on effects, and increased quality of remaining planting stock, with associated yield effects.

Measures to increase efficiency within marketing channels as a means of enhancing producer incomes can be adopted. This can involve vertical integration to internalise profits within the channel, such as is practised by the NZ Dairy Board, or by fixing retail or wholesale margins. This approach has been followed by the NZ Apple and Pear Board but Rae notes that it reduced price competition among distributors.

Quality assurance can have price-enhancing effects by setting minimum quality of product and presentation, and can also increase customer confidence. However, Jesse (1981) suggests that quality standards may impose supply restrictions to a degree, and reduce the choice available to consumers who may prefer to trade off price against out-of-specification product.

The above two measures may both be employed without the necessity of supply management. While quality assurance may increase price there is an associated increase in quality and as market price is set by the level of import prices for that product, the price increase may not be great. Increasing market efficiency results in no price increase to consumers at all. Hill (1982) has observed that marketing authorities in Canada are not effective in increasing prices unless supply is also controlled.

Supply management can be applied in the short term to stabilise prices by product diversion or destruction, or in the long term to increase prices and incomes by production licences or quota systems. Supply control enables a marketing organisation to act like a monopolist in the market, and by driving the price up, to increase returns to the producer. Success in this does however depend on the consumption response to price for that product. There are also a number of problems associated with supply management.

Because importers can also affect price by their activities in the market place, supply-controlled products automatically require protection from import competition. This may be unacceptable for political reasons.

Unless participation by producers in the supply-controlling organisation is mandatory, there will always be "free-riders", producers who benefit from price effects without accepting the discipline or contributing to the cost of the organisation. Blumencron and Alvensleben (1978) developed a model which demonstrated that most of the benefits from supply control will go to non-co-operators, unless the organisation controls a very large share of the market. Piggott (1981) similarly demonstrated that unless a supply-restricting cartel can provide greater average gains to co-operators, members will be encouraged to leave the cartel and it will fail. Gains from supply management are affected by price elasticity of demand - the lower the elasticity, the larger the total gain. Gains to co-operators and non-co-operators also depend on the supply elasticities faced by each group, but co-operator gains are negatively affected by non-co-operator supply elasticities while the reverse does not hold. Therefore, if supply management is to be contemplated, the organisation must be able to compel producers.

Where long-run supply management is applied, adjustments to productive capacity induced by distorted product prices can lead to misallocation of resources. Veeman (1982) suggests that the incentive to adopt cost-reducing technology is also diminished, and relatively inefficient producers are encouraged to remain in the industry.

The most important criticism is that part of the supply management benefits are capitalised into quota values, which eventually are included in production cost formulas, thereby reducing consumer benefits for no gain. The cost to the consumer, as observed by Borcharding et al (1981) in a discussion of the Canadian egg production system, can be considerable, although Rae demonstrated that the NZ Apple and Pear Board's supply restriction activities when compared to profit-maximising or competitive conditions have generated substantial increases in consumer surplus at the cost of a small reduction in actual over potential producer earnings. However, the general case is that producer benefits from long-term management have been achieved both at the expense of increases in consumer expenditure on reduced levels of consumption, and with substantial losses in efficiency.

Some success has been noted in measures to increase demand through market improvement strategies. The success of the NZ Dairy Board in new product and market development is an example of this.

While marketing organisations have typically experienced

positive results in terms of intergrating the activities of diverse farm and agri-business firms, in achieving economies of size, in implementing market information services and grading standards, and in achieving gains due to bargaining power, many such gains could be achieved with alternative marketing structures.

11.2 Marketing Institutions and the Market Environment

Where the establishment of a marketing organisation is contemplated, it is necessary to recognise that not all market situations will respond positively to intervention. Various workers have stressed the need to study the key parameters in each case before proceeding with such a course of action.

The objectives of intervening in the marketplace will be known; what must also be answered are the questions: What mechanisms will achieve these objectives? How effective are they? What other effects are to be expected?

The most appropriate type of market institution is also dictated by:

- a) The size of the market, and the proportion supplied by the proposed institution.
- b) The degree of consensus within the marketing channel.
- c) Price and income elasticities of demand in the market, and elasticity of supply.
- d) The maturity of the industry or product. The appropriate form of an institution serving a given product can change over time.
- e) The nature of other participants in the market.

The current operating efficiency of the market should also be considered. Warley has suggested that most agricultural markets enjoy a relatively high degree of price-efficiency already, and that the activities of market organisations may therefore gain little for the producer without some income transfers from consumers. Rae (1981) and Veeman (1982) both point out that where producers' individual income levels or stability is considered unacceptable, direct transfers via taxation and other policy measures can be a more equitable means of offsetting the problem than manipulating the market process.

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